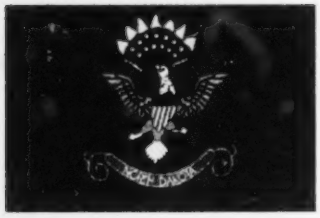
NORTH PORTAL/PORTAL BORDER CROSSING STUDY

1998 ANNUAL REPORT

Saskatchewan

North Dakota



Saskatchewan Highways and Transportation
Transportation Policy Branch
Intergovernmental Affairs Unit

103-04694/

Saskatchewan Highways and Transportation
1855 Victoria Avenue
Regina, Saskatchewan, Canada
S4P 3V5

NORTH PORTAL/PORTAL BORDER CROSSING STUDY

1998 ANNUAL REPORT

Prepared for

Saskatchewan Highways and Transportation
and
North Dakota Department of Transportation

Prepared by

Saskatchewan Highways and Transportation
Transportation Policy Branch
Intergovernmental Affairs Unit

April 1999

SUMMARY

Saskatchewan Highways and Transportation and North Dakota Department of Transportation are committed to a two-year study of international commercial truck traffic at the Port of North Portal/Portal. The study commenced in January of 1998 with completion expected in December of 1999. Information from this study is intended to provide both Departments with sufficient details to make key decisions regarding infrastructure and policy planning, future upgrades, and the harmonization of trucking regulations.

Truck operators are surveyed on-site at Canada and United States Customs at the port. The 1998 surveys yielded a total sample size of 1,165 which provides reliable statistics for directional traffic, truck characteristics, route information, and commodity trends at the 95% confidence level with a 3% to 4% margin of error.

The main results extracted from the 1998 survey database are listed and briefly described below.

- 55% of all trucks surveyed were northbound; the remaining 45% were southbound
- Most trucks were 5- and 6-axle semi trailer configurations, combining for a total of 83% of all trucks surveyed (73% and 10%, respectively)
- Collectively, Saskatchewan, Alberta, and North Dakota comprise 67% of all vehicle registration locations
- Truck operators' gross vehicle weight (GVW) estimations resulted in an overall average GVW of 68,600 lb
- 86% of northbound trucks and 92% of southbound trucks were loaded; 14% northbound and 8% southbound were empty
- 72% of trucks originating in North Dakota destined to Saskatchewan were empty – these trucks were en route for back hauling purposes
- International commercial truck traffic via North Portal/Portal frequents the following principal routes in Saskatchewan the most: #39, #11, Trans-Canada (#1), #6, #16, #2, and #47; and the following principal routes in North Dakota: U.S. routes 52, 2, 83, & 281, Interstates 94 & 29, and State highways 5 & 15
- Most northbound trucks originate in North Dakota with Saskatchewan/Alberta as their primary destination(s); likewise, most southbound trucks originate in Alberta or Saskatchewan with North Dakota as *their* primary destination
- Machinery & parts, vehicles & parts, and steel & steel products were the primary commodities from North Dakota/United States to Saskatchewan/Canada
- Vegetable products (mostly canola for North Dakota), mineral products, wood & wood products, and products of the chemical industry were the primary commodities from Saskatchewan/Canada to North Dakota/United States

CONTENTS

	Page
1.0 INTRODUCTION	1
1.1 Project Management	1
1.2 Purpose	1
1.3 Scope	1
2.0 BACKGROUND	2
2.1 Schedule and Location	2
2.2 Sample Size	3
2.3 Existing Documents	3
2.4 Report Organization	3
3.0 METHODOLOGY	3
4.0 DISCUSSION	4
4.1 Traffic Direction	4
4.2 Vehicle Information	4
4.2.0 Truck Configuration	4
4.2.1 Vehicle Registration	5
4.2.2 Gross Vehicle Weight (GVW)	6
4.3 Commodity Information	6
4.3.0 Loaded/Empty Status	6
4.3.1 Commodities	7
4.3.2 Northbound Commodities	7
4.3.3 Southbound Commodities	9
4.4 Travel Information - Origins and Destinations	10
4.5 Overall Reciprocal Trade and Traffic Patterns	13
4.6 Principal Routes	17
4.7 Canada and United States Customs Information	19
4.8 North Portal/Portal Infrastructure Improvements	19
4.9 Intergovernmental Initiatives	20
5.0 CONCLUSIONS	21
6.0 REFERENCES	22

APPENDICES

A. Origin/Destination Survey Form

B. Commodity Classification Table

LIST OF FIGURES

		Page
Figure 1	**Traffic Direction**	4
Figure 2	**Truck Configuration (1998)**	5
Figure 3	**Location of Vehicle Registration (1998)**	6
Figure 4	**U.S. Commodities Destined to Canada (1998)**	7
Figure 5	**U.S. Commodities Destined to Saskatchewan (1998)**	8
Figure 6	**North Dakota Commodities Destined to Saskatchewan (1998)**	8
Figure 7	**Canadian Commodities Destined to the U.S. (1998)**	9
Figure 8	**Canadian Commodities Destined to North Dakota (1998)**	9
Figure 9	**Saskatchewan Commodities Destined to North Dakota (1998)**	10
Figure 10	**Top Ten Origins of Northbound Traffic (1998)**	11
Figure 11	**Destinations of Northbound Traffic (1998)**	11
Figure 12	**Origins of Southbound Traffic (1998)**	12
Figure 13	**Top Ten Destinations of Southbound Traffic (1998)**	13
Figure 14	**Traffic Originating in North Dakota (1998)**	14
Figure 15	**Total United States Traffic Destined to Saskatchewan (1998)**	15
Figure 16	**Total Saskatchewan Traffic Destined to the United States (1998)**	16
Figure 17	**Principal Arterial Routes – Saskatchewan and North Dakota** *Total Traffic – 1998 (N = 1,165)*	17-1
Figure 18	**Principal Arterial Routes – North Dakota Traffic Destined to Saskatchewan (1998)** *(N = 107)*	18-1
Figure 19	**Principal Arterial Routes – Saskatchewan Traffic Destined to North Dakota (1998)** *(N = 150)*	18-2

NORTH PORTAL/PORTAL BORDER CROSSING STUDY

1998 ANNUAL REPORT

1.0 INTRODUCTION

1.1 Project Management

The Grain and Rail Unit within Saskatchewan Highways and Transportation initially managed the North Portal/Portal Border Crossing Study. In January of 1999 it was transferred to the Transportation Policy Branch and is currently managed by the Intergovernmental Affairs Unit.

1.2 Purpose

The immediate objective of this project is to identify which principal arterial routes via North Portal/Portal are most utilized by international commercial truck traffic. A concurrent immediate objective is to identify truck characteristics, traffic patterns, and trends in commodity trading. The longer-term objective for both Saskatchewan and North Dakota is to use this information for purposes of infrastructure and policy planning, future upgrades, and harmonizing trucking regulations.

1.3 Scope

Our report will

- Provide background information.
- Describe the methodology used to obtain and manage the survey data.
- Identify and analyze specific trends in the form of illustrative charts and maps.
- Identify and discuss trends in commodity trading.
- Identify and discuss the principal arterial routes used in both Saskatchewan and North Dakota.
- Discuss all database query results.
- Discuss Canada and United States Customs information.
- Discuss infrastructure improvements and intergovernmental initiatives.

2.0 BACKGROUND

2.1 Schedule and Location

The expected duration of this study is two years; the first survey period commenced in January of 1998 and will end with the last survey period in October of 1999. All surveys are conducted on-site at Canada and U.S. Customs at the North Portal/Portal border crossing.

The following are the surveys conducted to date:

1998 Surveys

- **Winter Survey**

Tuesday, January 20	8:00 a.m. to 8:00 p.m.
Wednesday, January 21	8:00 a.m. to 8:00 p.m.

- **Spring Survey**

Monday, April 6	8:00 a.m. to 8:00 p.m.
	8:00 p.m. to 8:00 p.m. (Saskatchewan only)
Tuesday, April 7	8:00 a.m. to 8:00 p.m.

- **Summer Survey** – *cancelled due to construction*

Thursday, July 23	8:00 a.m. to 8:00 p.m.
Friday, July 24	8:00 a.m. to 8:00 p.m.

- **Autumn Survey**

Wednesday, October 28	8:00 a.m. to 8:00 p.m.
Thursday, October 29	8:00 a.m. to 8:00 p.m.

Note: ***the above 1998 surveys yielded a total sample size of 1,165.***

1999 Surveys

- **Winter Survey**

Wednesday, January 27	8:00 a.m. to 8:00 p.m.
Thursday, January 28	8:00 a.m. to 8:00 p.m.

- **Spring Survey**

Tuesday, April 20	8:00 a.m. to 8:00 p.m.
Wednesday, April 21	8:00 a.m. to 8:00 p.m.

2.2 Sample Size

The total sample size for the 1998 surveys was 1,165, comprised of 640 northbound trucks and 525 southbound trucks. These sample sizes provide reliable statistics for overall truck characteristics, directional traffic, and commodity trends at the 95% confidence level with a 3% to 4% margin of error.

Note: we recommend care be exercised when making inferences regarding trips originating in Saskatchewan and destined for North Dakota (Figures 9 & 19, where $N = 150$) as well as trips originating in North Dakota and destined for Saskatchewan (Figures 6 & 18, where $N = 107$). Because of these small sample sizes, the margin of error is 8% to 10% at the 95% confidence level.

2.3 Existing Documents

A semi-annual report released in June of 1998 was based on the 1998 winter and spring surveys. The analyses and discussion contained within this report were based on 802 samples. All results and trends in our 1998 annual report are consistent with those discussed in the semi-annual report.

2.4 Report Organization

The analyses and discussion for our report will be presented in the same sequence in which the questions appear on the origin/destination survey form. A copy of this form appears as **Appendix A**.

3.0 METHODOLGY

Saskatchewan Highways and Transportation officials surveyed all northbound truck traffic while North Dakota Department of Transportation officials surveyed all southbound truck traffic.

Saskatchewan Highways and Transportation agreed to manage all survey data. The hard copies of the survey questionnaires were entered into an electronic database (MS Access) via a customized data entry program. We subsequently queried this database to identify 1998 trends and other specific information pertinent to this study. The query results comprise **Section 4.0** of our report.

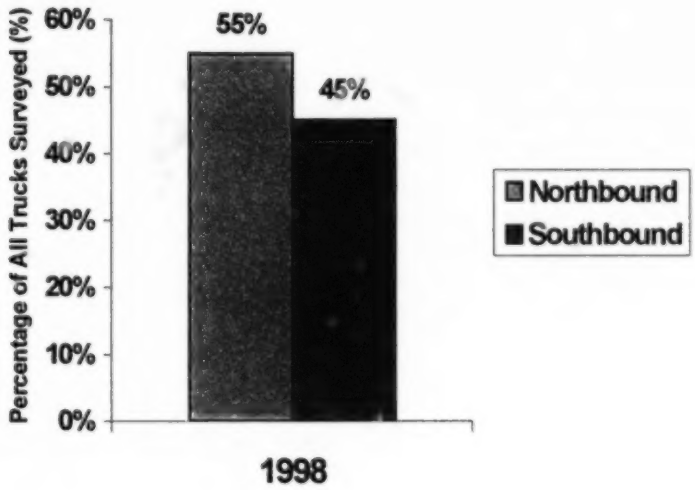
We performed structured query language (SQL) queries within MapInfo Professional 5.0 (mapping software) to identify and analyze principal arterial routes. These query results appear as thematic maps in **Section 4.6**.

4.0 DISCUSSION

4.1 Traffic Direction

The traffic direction of all trucks surveyed in 1998 is illustrated in **Figure 1** below. Of the 1,165 trucks surveyed, 640 (55%) had northbound destinations; 525 (45%) had southbound destinations.

Figure 1 Traffic Direction

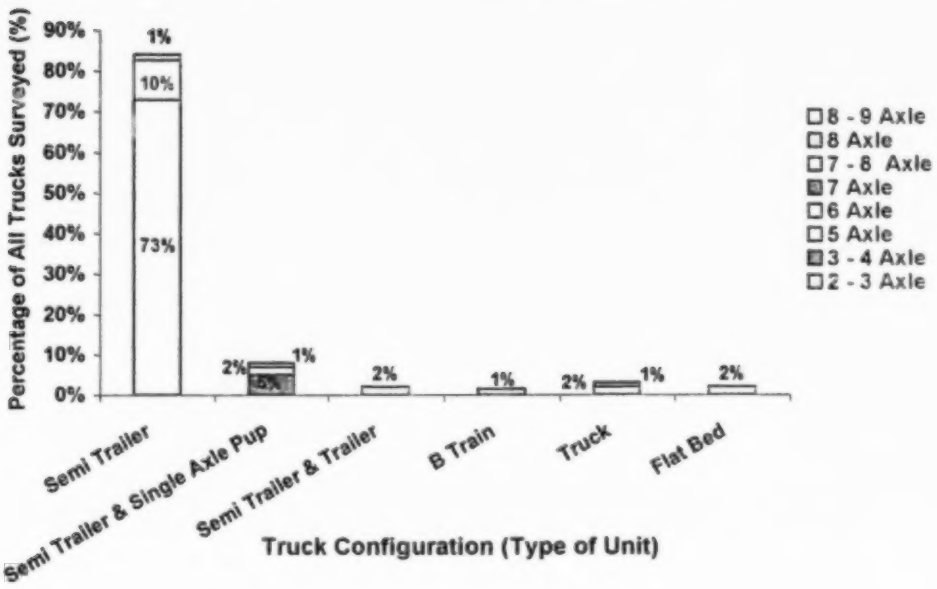


4.2 Vehicle Information

4.2.0 Truck Configuration

The most common truck configuration was the 5-axle semi trailer unit (73%). The 6-axle semi trailer units were a distant second, comprising 10% of all trucks surveyed. **Figure 2 on page 5** illustrates all truck configurations and their relative percentages by number of axles.

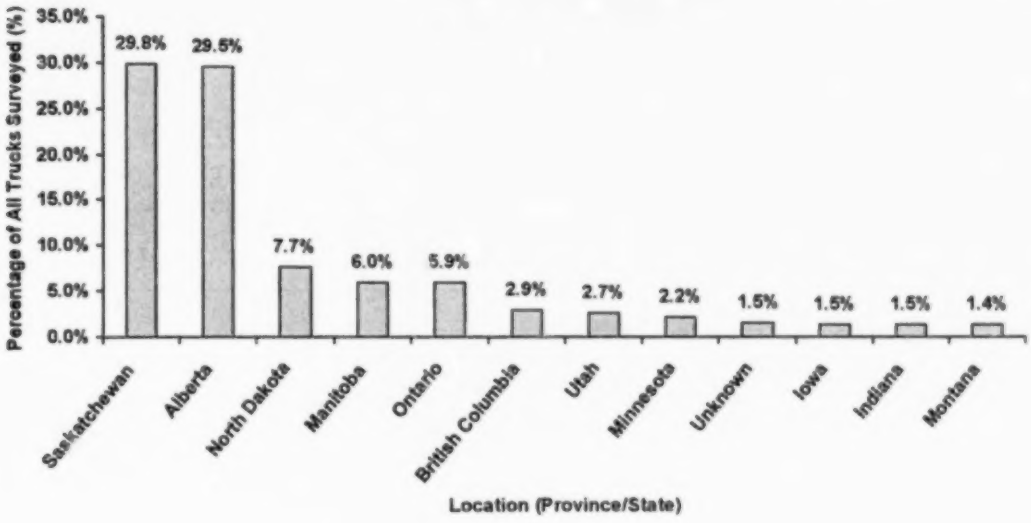
Figure 2 Truck Configuration (1998)



4.2.1 Vehicle Registration

Commercial trucks/trailers may be registered in more than one province or state; in these cases, surveyors recorded only the main plate. The most common states and provinces of registration for the 1998 surveys are illustrated in **Figure 3 on page 6**. Over half the trucks (59%) surveyed were registered in either the province of Saskatchewan (29.8%) or Alberta (29.5%). Saskatchewan, Alberta, North Dakota, Manitoba, Ontario, British Columbia, and Utah account for a total of 85% of all vehicle registration locations.

Figure 3 Location of Vehicle Registration (1998)



4.2.2 Gross Vehicle Weight (GVW)

Without the use of on-site weigh scales at Customs we cannot provide an accurate detailed analysis of GVW. That is, most GVW's reported by truck operators were rough estimations. Therefore, we do not have sufficient confidence that this data is representative. The following numbers are based on the truck operators' estimations: maximum reported GVW = 107,000 lb, minimum reported GVW = 8,600 lb, average GVW (for 1998) = 68,600 lb.

4.3 Commodity Information

4.3.0 Loaded/Empty Status

Of the 640 northbound trucks surveyed, 550 (86%) were loaded; 90 (14%) were empty. Of the 525 southbound trucks surveyed, 483 (92%) were loaded; 42 (8%) were empty.

4.3.1 Commodities

The commodity classifications used in the following analyses and discussion are based on the "Standard Classification of Goods". This commodity classification structure appears as the "Commodity Classification Table" in **Appendix B**.

Note: in addition to illustrating commodity trading, the figures in Sections 4.3.2 and 4.3.3 also include percentages of *empty* trucks. These empty units were primarily en route to specific destinations for *back hauling* purposes. We define back hauling as travelling empty/loaded along a specific route and subsequently returning *with a load* via the *same* route.

4.3.2 Northbound Commodities

Figure 4 below illustrates the types of commodities entering Canada from the United States via the North Portal/Portal border crossing. The top three commodities entering Canada in 1998 were machinery and parts (25%), vehicles and parts (9%), and steel & steel products (9%).

Figure 4 U.S. Commodities Destined to Canada (1998)

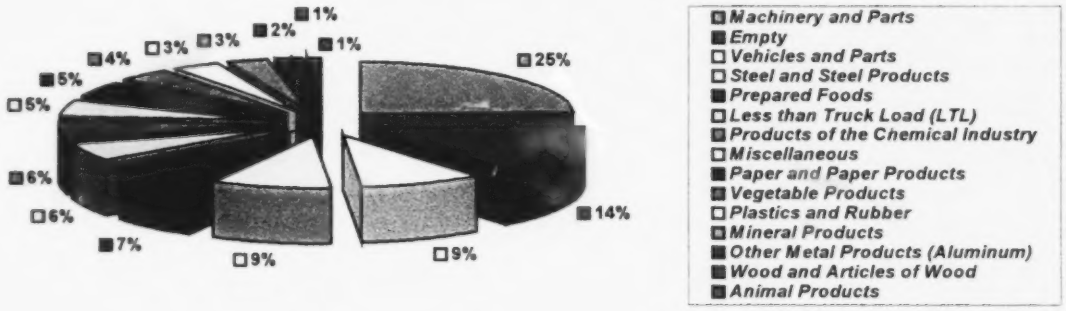
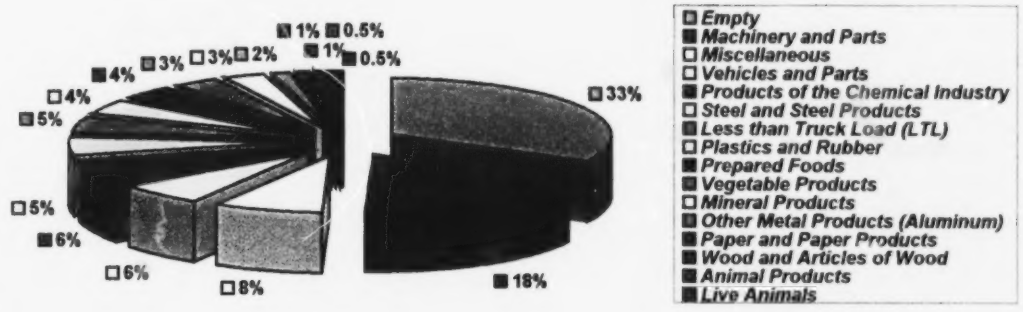


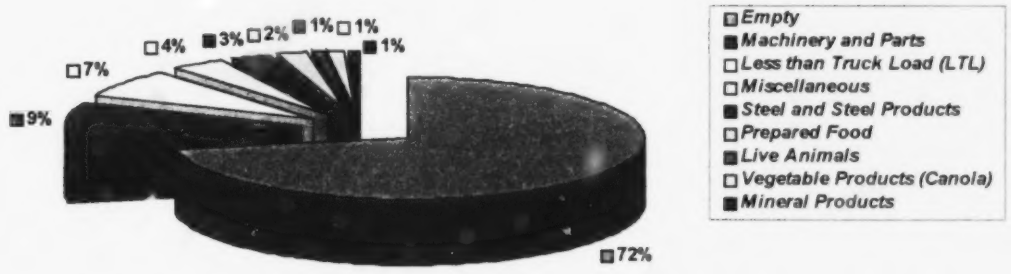
Figure 5 on page 8 illustrates the commodities entering Saskatchewan in 1998 from the United States via North Portal/Portal. The top three were machinery and parts (18%), miscellaneous goods (8%), and vehicles and parts (6%).

Figure 5 U.S. Commodities Destined to Saskatchewan (1998)



The vast majority (72%) of trucks destined to Saskatchewan from North Dakota were empty and thus en route for back hauling purposes (i.e. back to North Dakota or other states). The top three commodities in 1998 were machinery and parts (9%), LTL (7%), and miscellaneous goods (4%) as illustrated in **Figure 6** below.

Figure 6 North Dakota Commodities Destined to Saskatchewan (1998)



4.3.3 Southbound Commodities

Figure 7 below illustrates the types of commodities entering the United States from Canada via the North Portal/Portal border crossing. The top three were wood and articles of wood (19%), vegetable products (12%), and products of the chemical industry (11%). The common destinations of these commodities were North Dakota, Minnesota, and South Dakota.

Figure 7 Canadian Commodities Destined to the U.S. (1998)

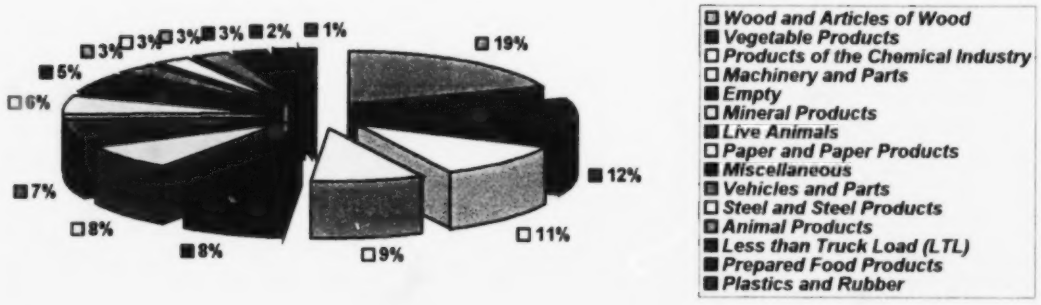
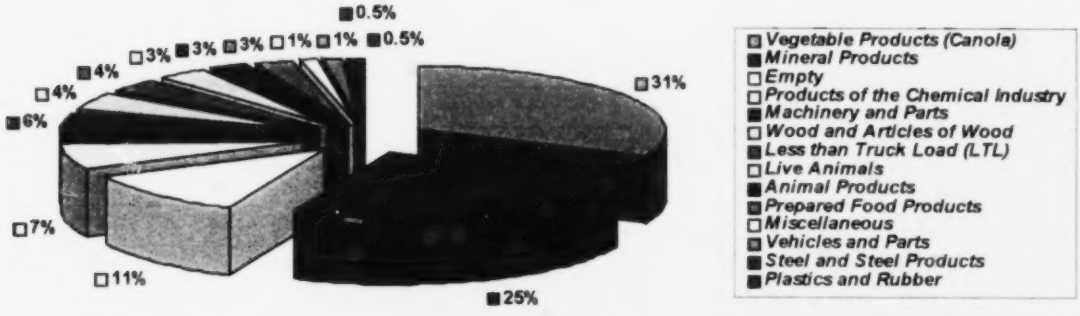


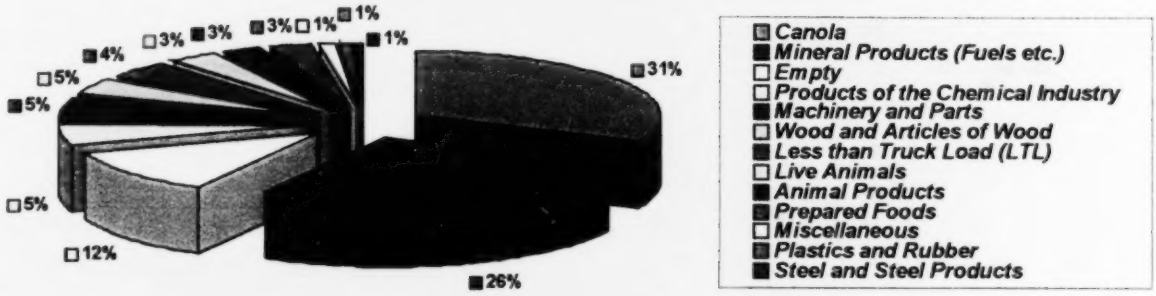
Figure 8 below illustrates Canadian commodities destined to North Dakota in 1998. The top three were vegetable products – primarily canola (31%), mineral products – primarily charcoal & fuel (25%), and products of the chemical industry (7%).

Figure 8 Canadian Commodities Destined to North Dakota (1998)



Commodities originating in Saskatchewan and destined for North Dakota are illustrated in **Figure 9** below. The most common commodities destined for North Dakota were canola (31%) and mineral products (26%) - the main sub-classification of mineral products was fuels (gasoline and diesel).

Figure 9 Saskatchewan Commodities Destined to North Dakota (1998)



4.4 Travel Information - Origins and Destinations

The top ten origins and all destinations of *northbound* traffic for 1998 are illustrated in **Figures 10 and 11 on page 11**. Approximately 50% of all truck traffic destined north to and/or through Saskatchewan *originated* in North Dakota (20%), Ontario (8%), Iowa (7%), Minnesota (7%), Illinois (6%), and Indiana (6%). Ninety-eight percent (98%) were *destined* to the Canadian provinces of Alberta, Saskatchewan, and British Columbia.

Figure 10 Top Ten Origins of Northbound Traffic (1998)

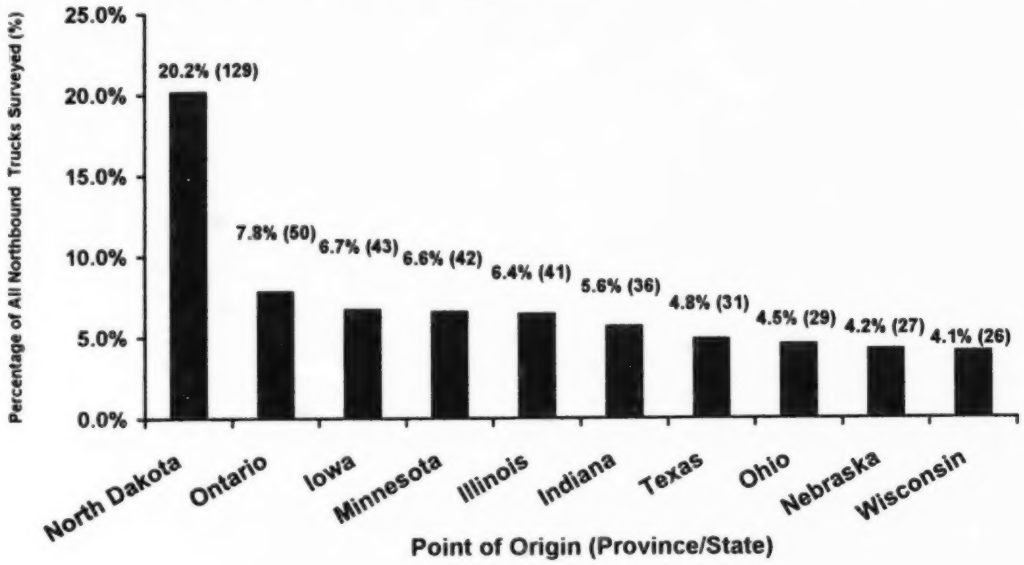
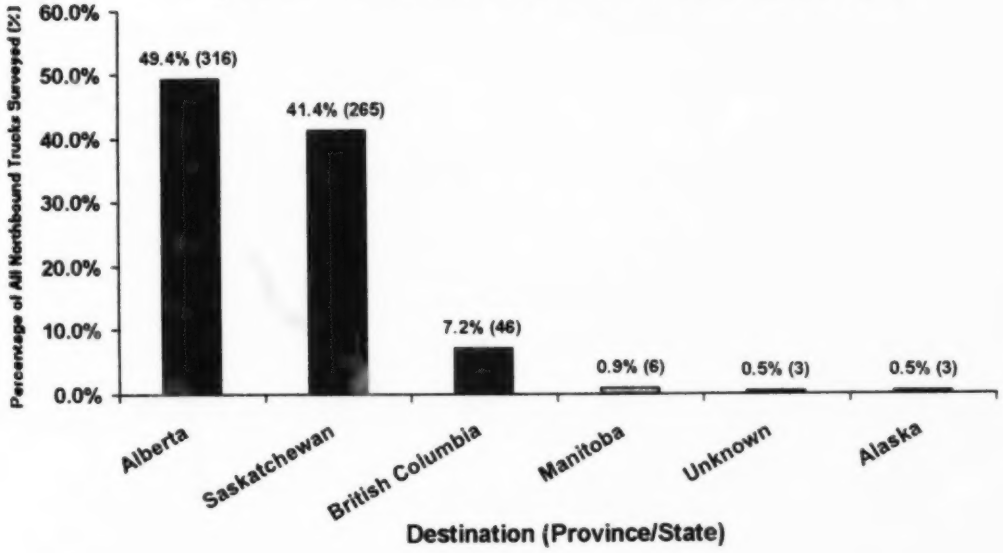


Figure 11 Destinations of Northbound Traffic (1998)



The majority of total truck traffic (97%) destined south to and/or through North Dakota originated from three western Canadian provinces – Saskatchewan (55%), Alberta (35%), and British Columbia (7%). This traffic was primarily destined to North Dakota (31%), Minnesota (9%), Texas (6%), and South Dakota (6%). **Figure 12** below illustrates the *origins* of southbound traffic in 1998. **Figure 13 on page 13** illustrates the top 10 *destinations* of southbound traffic in 1998.

Figure 12 Origins Of Southbound Traffic (1998)

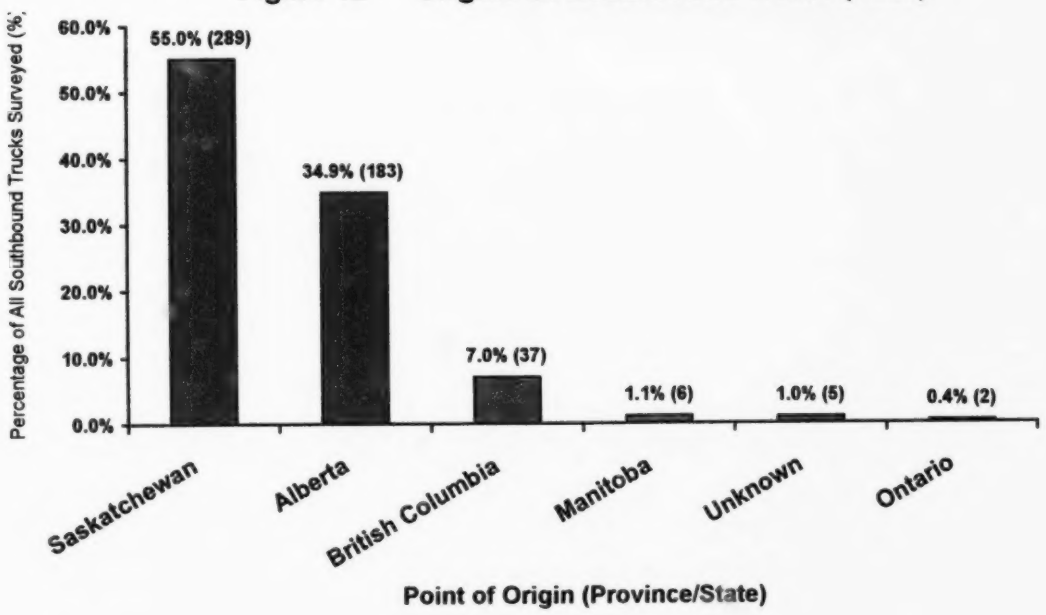
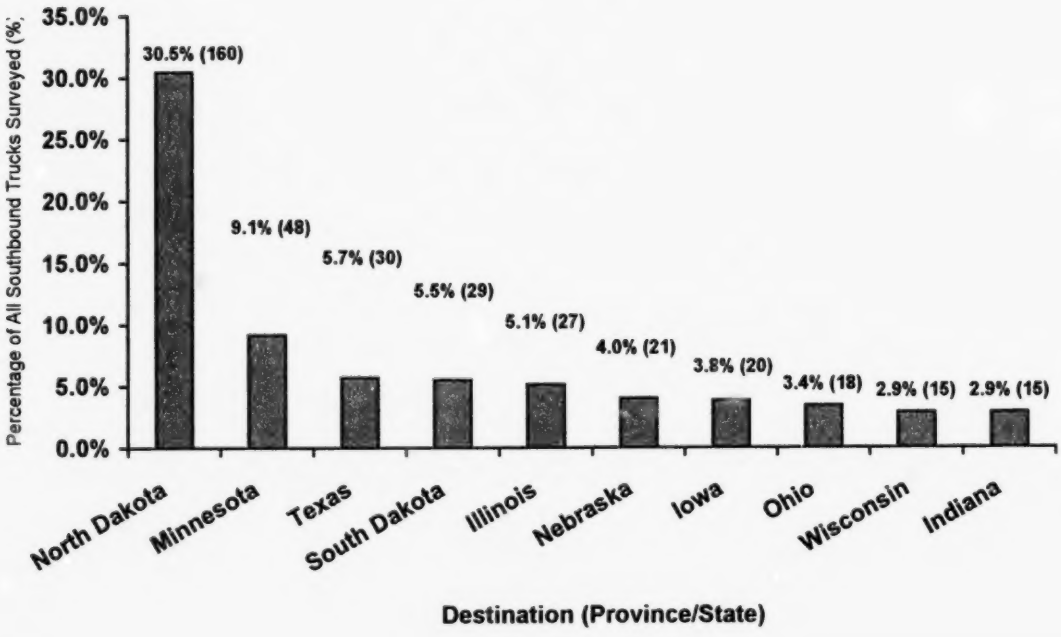


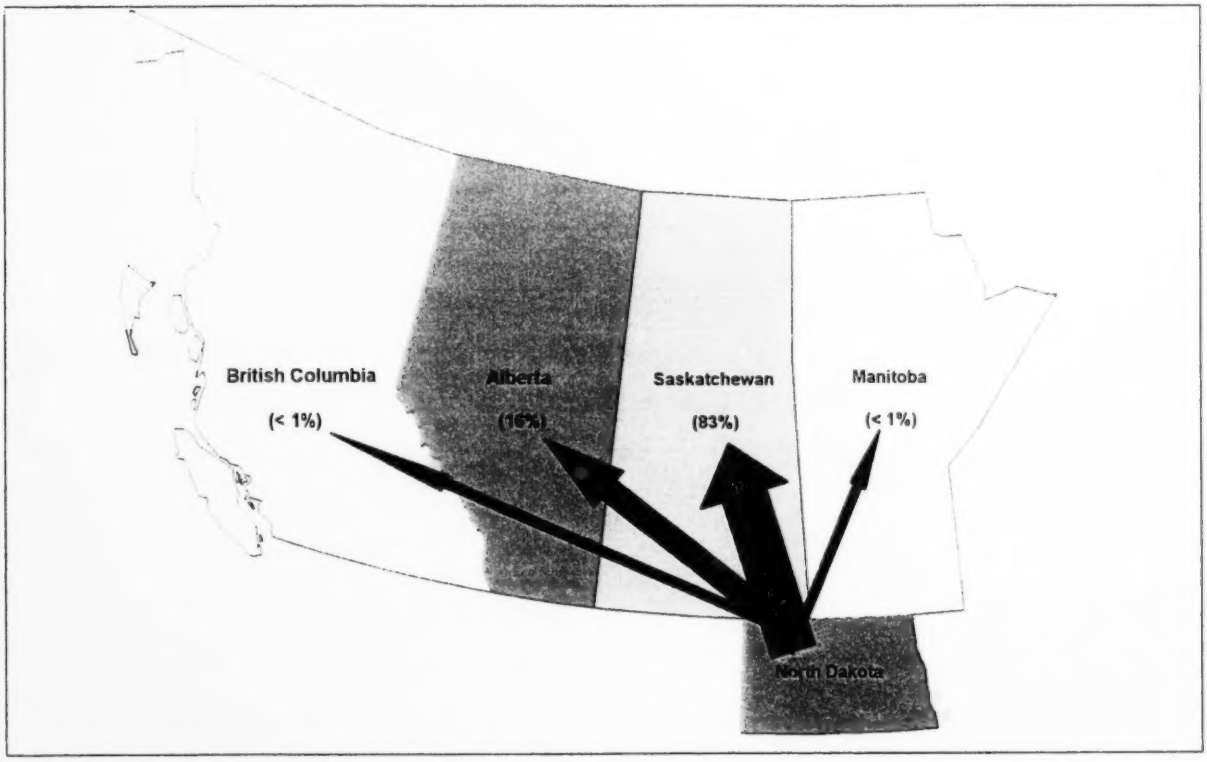
Figure 13 Top Ten Destinations of Southbound Traffic (1998)



4.5 Overall Reciprocal Trade and Traffic Patterns

When isolating North Dakota as the *only* point of origin and considering Canada as the *collective destination*, one hundred percent (100%) of North Dakota's commercial truck traffic via North Portal/Portal was en route to *Western* Canada. Saskatchewan (83%) was the primary destination; Alberta (16%) was the secondary destination. Manitoba and British Columbia comprise the remaining one-percent (1%) as illustrated in **Figure 14 on page 14.**

Figure 14 Traffic Originating in North Dakota (1998)



Considering the United States as a *collective point of origin* and Saskatchewan as the *only* destination forty percent (40%) of trucks came from North Dakota. The following are the other major U.S. points of origin: Minnesota (9%), Illinois (9%), and Iowa (6%). The above four states comprise sixty-four percent (64%) of all United States traffic/commodities destined to Saskatchewan as illustrated in **Figure 15 on page 15.**

Overall trade and traffic patterns between Saskatchewan (*origin*) and the United States/North Dakota (*destination*) are illustrated in **Figure 16 on page 16**. The following were the top four U.S. destinations: North Dakota (52%), Minnesota (11%), South Dakota (6%), and Nebraska (4%). These four states comprise seventy-three percent (73%) of all Saskatchewan traffic/commodities destined to the United States.

Given the percentages discussed above, the North Portal/Portal trade corridor is clearly an important reciprocal link for both Saskatchewan and North Dakota.

Figure 15 Total United States Traffic Destined to Saskatchewan (1998)

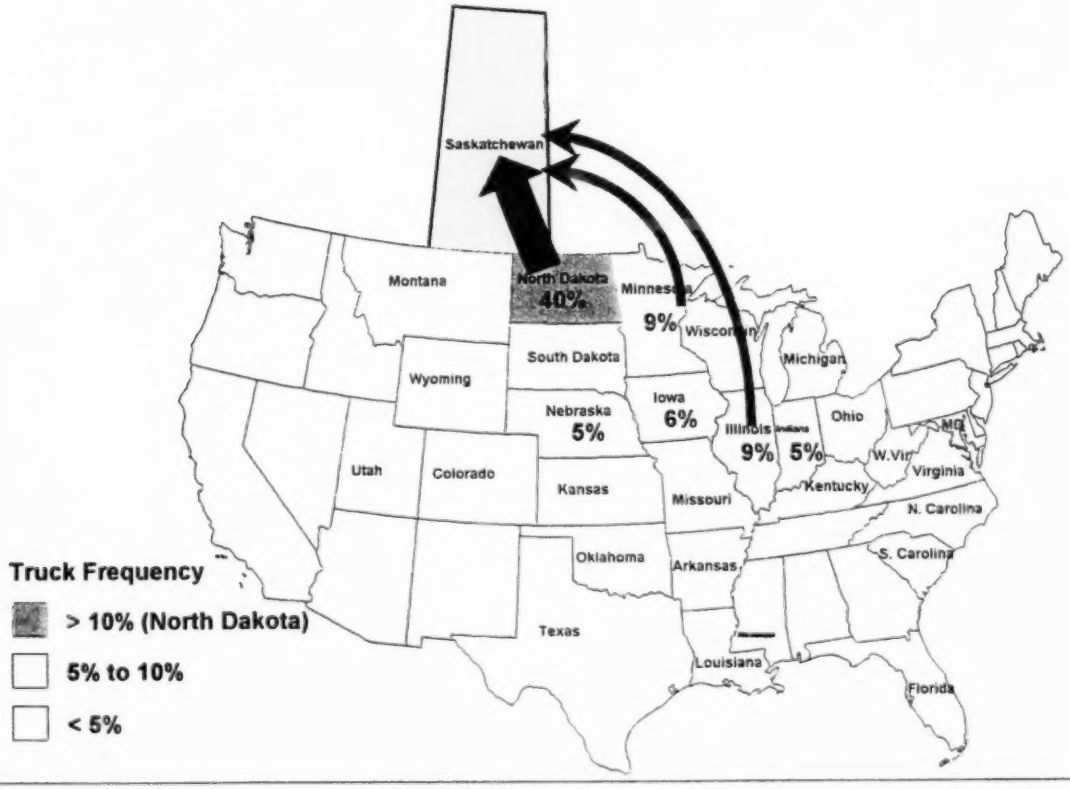
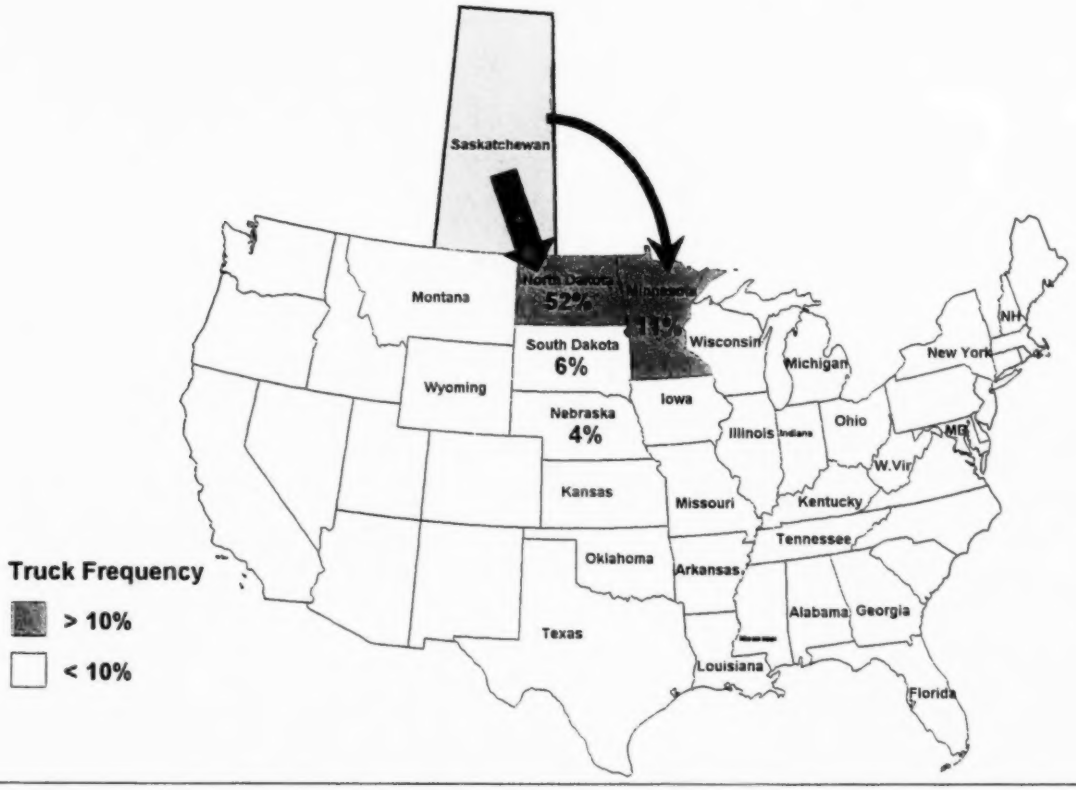


Figure 16 Total Saskatchewan Traffic Destined to the United States (1998)



APPENDIX A

Origin/Destination Survey Form

4.6 Principal Routes

Because highway 39 in Saskatchewan and U.S. Route 52 in North Dakota converge at North Portal/Portal, all (100%) surveyed trucks in 1998 used at least one section of these two arterial routes (on both sides of the border). **Figure 17 on page 17-1** illustrates truck frequencies on the principal arterial routes in both Saskatchewan and North Dakota - based on the total 1998 sample size (1,165).

Saskatchewan highway sections with the greatest truck frequencies in 1998 are listed below (*refer to Figure 17*):

- Highway 39 — North Portal to Estevan
- Highway 39 — Estevan to Moose Jaw
- Highway 11 — Regina to Saskatoon
- Trans-Canada (#1) — Moose Jaw to Saskatchewan/Alberta border
- Highway 6 — Corinne (#6/#39 junction) to Regina
- Highway 16 — Saskatoon to Lloydminster
- Highway 2 — Moose Jaw to Chamberlain
- Highway 47 — Estevan to Stoughton
- Trans-Canada (#1) — Regina to Moose Jaw

Likewise, the following is a list of *North Dakota* highway sections with the greatest truck frequencies in 1998 (*refer to Figure 17*):

- U.S. Route 52 — Minot to Portal
- U.S. Route 2 — Grand Forks to Minot
- Interstate 94 — Fargo to Bismarck
- U.S. Route 83 — North Dakota/South Dakota border to Minot
- Interstate 29 — North Dakota/South Dakota border to Grand Forks
- U.S. Route 281 — North Dakota/South Dakota border to Carrington
- State 15 — U.S. Route 281/State 15 junction to Fessenden
- State 5 — Lignite to State 5/U.S. Route 85 junction

As seen in Figure 17, both Saskatchewan and North Dakota have clearly defined junctions of convergence and divergence. In Saskatchewan, most *northbound* truck traffic leaving North Portal *diverges* at Corrine, Regina, Moose Jaw, and Saskatoon; most *southbound* truck traffic en route to North Portal *converges* at these same locations. In North Dakota, most *northbound* truck traffic en route to Portal *converges* at Minot; most *southbound* truck traffic leaving Portal *diverges* at Minot.

Figure 17 Principal Arterial Routes - Saskatchewan and North Dakota

Total Traffic - 1998 (N = 1,165)

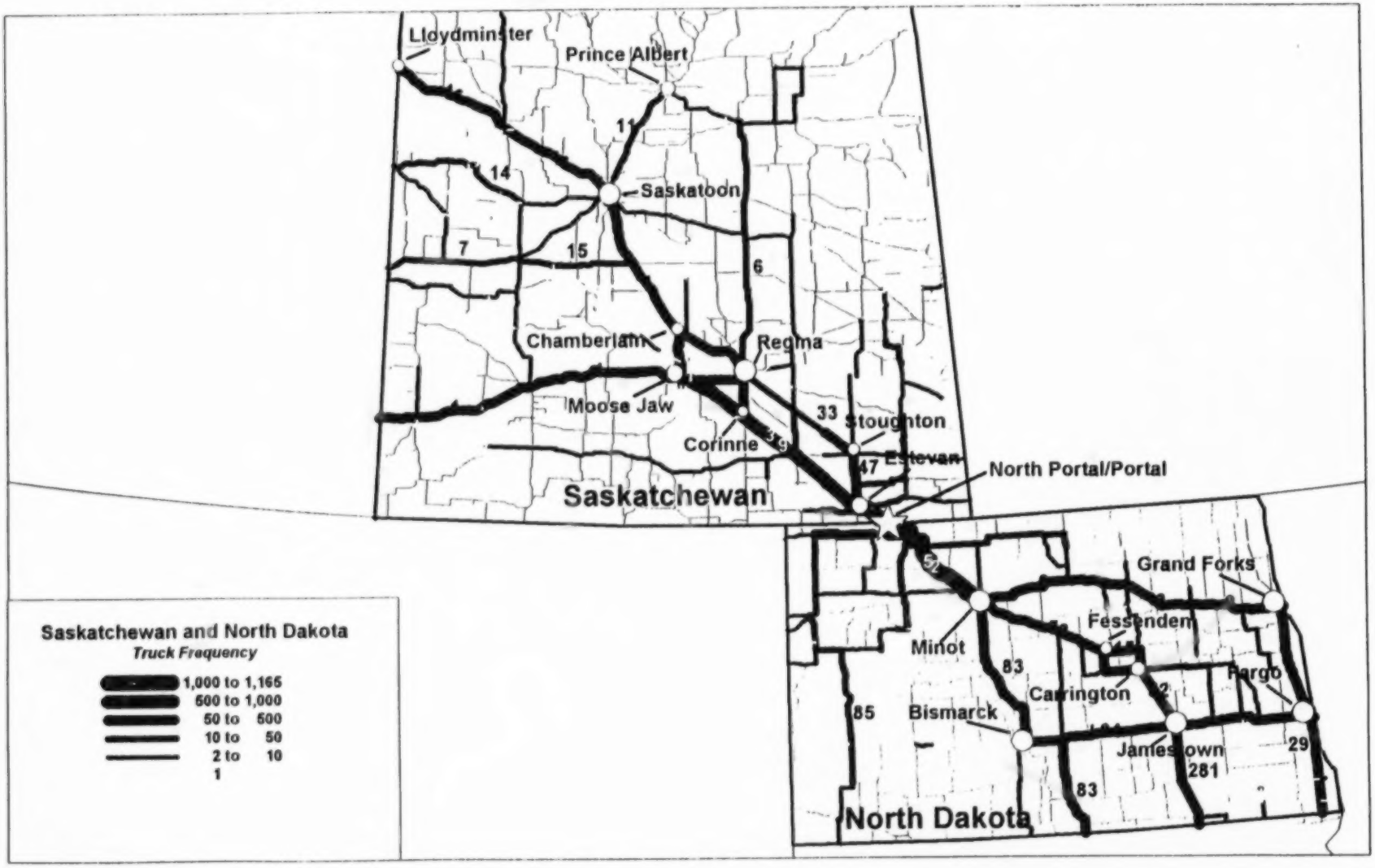


Figure 18 on page 18-1 illustrates the principal arterial routes used by trucks originating in North Dakota en route to Saskatchewan destinations. A list of the top five highways with the greatest truck frequencies in 1998 is contained within this figure. The following were the top five destination cities/towns: Regina (21%), Belle Plaine (18%), Bienfait & Estevan (7%), and Saskatoon (6%). As discussed in Section 4.3.2, most trucks (72%) from North Dakota to Saskatchewan were empty.

Likewise, **Figure 19 on page 18-2** illustrates the principal arterial routes used by trucks originating in Saskatchewan en route to North Dakota. Velva (32%), Minot (18%), Bowbells (14%), and Lignite & Tioga (3%) comprise the top five destination cities/towns.

Figure 18 Principal Arterial Routes - North Dakota Traffic Destined to Saskatchewan (1998) *(N = 107)*

(Including the Top Five Saskatchewan Destinations)

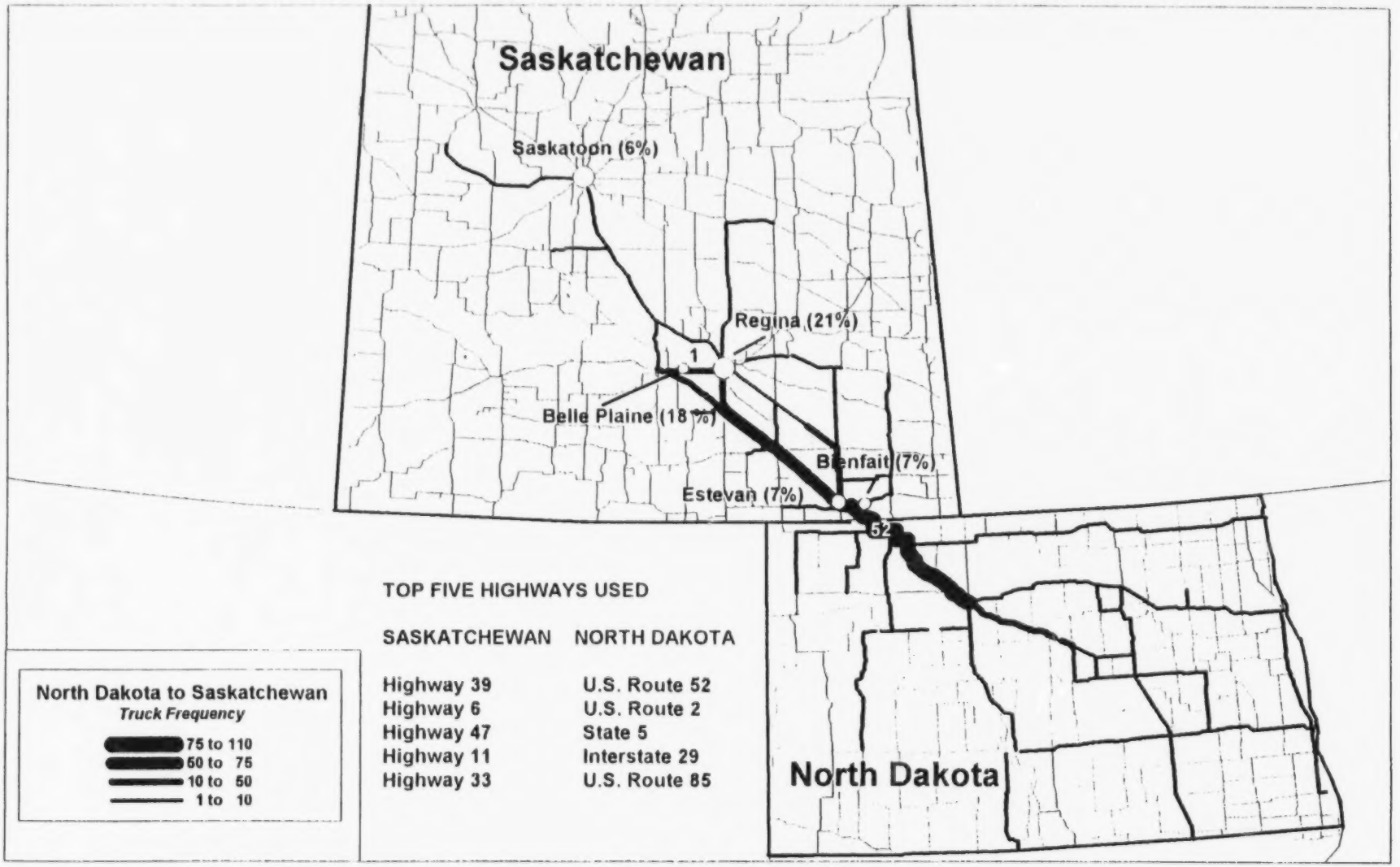
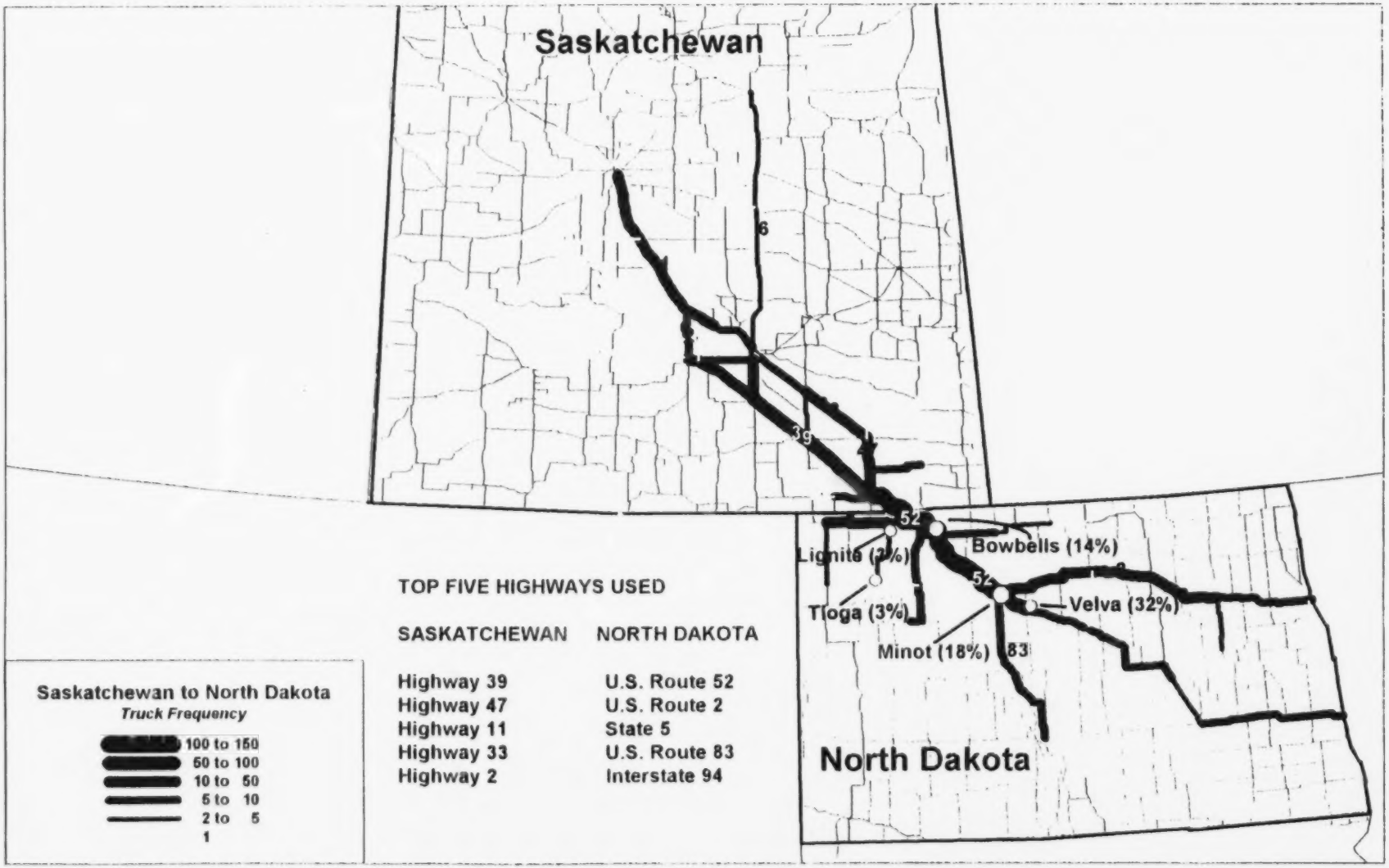


Figure 19 Principal Arterial Routes - Saskatchewan Traffic Destined to North Dakota (1998) *(N = 150)*

(Including the Top Five North Dakota Destinations)



4.7 Canada and United States Customs Information

The final two questions on the origin/destination survey form pertain to border crossing times and delays. Based on the total sample size for 1998, the average time to pass through North Portal/Portal was thirteen (13) minutes. Most truck drivers expressed satisfaction with Customs personnel in both Canada and the United States and seldom reported delays. The most significant delays were a direct result of Broker errors whereby truck operators can experience delays of up to eight (8) hours (and on rare occasions even longer). Traffic congestion and Customs inspections were the other main reasons for delays; the duration of these types of delays was highly variable but seldom longer than forty-five (45) minutes.

For northbound trucks, minimal delays are attributable to Revenue Canada's Line Release Program. The Pre-Arrival Review System (PARS) is a component of this program available to commercial importers at North Portal. Here, necessary details of any given shipment can be submitted up to five (5) days before it arrives in Canada; this permits Customs to enter and process all documentation via their computer system. Upon arrival, shippers using PARS can be released in less than five (5) minutes unless preprocessed documentation indicates the shipment be examined.

United States Customs has systems similar to PARS.

4.8 North Portal/Portal Infrastructure Improvements

Commercial truck traffic has increased at North Portal/Portal in recent years. The original design of the highway infrastructure and port itself could no longer safely accommodate this increase. Infrastructure improvements to both the highways and the port were proposed to promote and accommodate increased traffic/trade.

Delegates representing North Dakota, Saskatchewan, the town of Portal, and Canada & U.S. Customs met in January of 1998 to review new infrastructure designs. Upper Plains Contracting Incorporation (UPCI) of Aberdeen, South Dakota was subsequently contracted to begin construction in June of 1998. *(Ref. 1)*

The total cost for improvements was $1.7 million U.S., of which approximately $325,000 Cdn was allocated for Saskatchewan highway No. 39. Construction was successfully completed in October of 1998. The Minister of Saskatchewan Highways and Transportation, Judy Bradley, and North Dakota's Secretary of Transportation, Marshall Moore, officially opened the completed project at North Portal/Portal on November 16, 1998.

4.9 Intergovernmental Initiatives

Both Saskatchewan Highways and Transportation and North Dakota Department of Transportation (DOT) are investigating the viability of increasing truck weights in North Dakota. The DOT has suspected overweight Canadian trucks are bypassing their weigh scales and subsequently using secondary roads instead. Both Departments recognize that permitting heavier trucks in North Dakota may be important in terms of harmonizing trucking regulations – ultimately leading to more efficient and increased trade between both jurisdictions. *(Ref. 1)*

Both jurisdictions have agreed to investigate the processes and procedures for using Estevan and Minot weigh scale facilities for one-stop weighing of trucks. Saskatchewan would weigh all southbound commercial vehicles and Minot would weigh all those destined northbound. *(Ref. 1)*

The following are long-term intergovernmental initiatives:

- A joint weigh scale facility near the port of North Portal/Portal
- Lobby Federal Agencies to assist in implementing the latest border clearance technology
- Continued participation in the Central North American Trade Corridor Association (CNATCA) to pursue economic development opportunities that may result from integrating transportation initiatives

5.0 CONCLUSIONS

For the 1998 surveys at North Portal/Portal, northbound trucks (640 or 55%) slightly outnumbered southbound trucks (525 or 45%) – a ratio of 1.2 (northbound versus southbound). Based on the total sample size (1,165) and irrespective of traffic direction, these trucks had the following characteristics:

- Most were 5- and 6-axle semi trailer units, combining for a total of 83% of all trucks surveyed (73% and 10%, respectively)
- Most were registered in Saskatchewan (29.8%), Alberta (29.5%), and North Dakota (7.7%) – or collectively, 67%
- An average GVW of 68,600 lb (based on truck operators' estimations)

Overall and irrespective of any particular destination, 86% of northbound trucks were loaded while 92% of southbound trucks were loaded. When particular destinations *are* considered, the loaded/empty status in either direction becomes highly variable. Example: relatively large numbers of northbound trucks originating in North Dakota/United States and destined to Saskatchewan were in fact empty (from North Dakota, 72%, from the U.S., 33%). Empty trucks were primarily en route for back hauling purposes.

The *overall* percentages for loaded trucks in each direction indicate that commodity trading is reciprocated fairly evenly. The primary commodities originating in North Dakota/United States and destined to Saskatchewan/Canada were machinery & parts, vehicles & parts, steel & steel products, LTL, and miscellaneous goods. Conversely, the primary Saskatchewan/Canadian commodities destined to North Dakota/United States were vegetable products (mostly canola for North Dakota), mineral products, wood and articles of wood, products of the chemical industry, and machinery & parts.

Most *northbound* trucks via North Portal/Portal originate in North Dakota and usually destined for Alberta and/or Saskatchewan. In like manner, most *southbound* trucks originate in Alberta or Saskatchewan and usually destined for North Dakota.

Via North Portal/Portal, overall reciprocal trade and traffic between Saskatchewan and North Dakota is extensive. Eighty-three percent (83%) of trucks originating in North Dakota were destined to Saskatchewan; fifty-two percent (52%) of trucks with Saskatchewan origins were destined to North Dakota.

Considering the United States as a collective point of origin and Saskatchewan as the destination forty percent (40%) of trucks came from North Dakota.

Commercial truck traffic in Saskatchewan via North Portal/Portal frequents the following highways the most: #39, #11, Trans-Canada (#1), #6, #16, #2, and #47. U.S. Routes 52, 2, 83, & 281, Interstates 94 & 29, and State highways 5 & 15 are North Dakota's principal routes.

6.0 REFERENCES

1. Grain and Rail Unit, Border Crossing Study, North Portal/Portal, Semi-Annual Report, Saskatchewan Highways and Transportation, Regina, Saskatchewan, Canada, June 1998.

APPENDIX B

Commodity Classification Table

CATEGORY	CODE	COMMODITY
Live animals	1	Horses, cattle, hogs, sheep
Animal products	2-5	Beef, pork
Vegetable products	5-14	Canola, potatoes, sunflower seeds Soybean meal
Prepared foodstuffs	16-24	Corn meal, whiskey, juice, dog food, molasses, ketchup
Mineral products	25-27	Charcoal, salt, gasoline, diesel, propane
Products of the chemical industry	28-38	Herbicide, fertilizer, potash, liquid nitrogen
Plastics and rubber	39-40	Tires, various items made from plastic
Wood and articles of wood	44-46	Lumber, plywood, posts, various items made from wood
Paper and paper products	47-49	Rolls of paper, mail, newsprint
Steel and steel products	72 –73	Steel pipe, steel bars, various items made of steel
Other metal products	74-83	Aluminum
Machinery and parts	84-85	Farm equipment, oil field equipment, kitchen appliances
Vehicles and parts	86-89	Trucks, tractors, RV's, campers, truck toppers, chassis
Miscellaneous	41-43, 50-63, 68-70, 90-97	Glass, hides, textiles, office furniture

Source: Statistics Canada, Standard Classification of Goods 1996

ORIGIN-DESTINATION SURVEY
SASKATCHEWAN/NORTH DAKOTA BORDER

Date: ___/___/___ (DD MM YY) Time: _____ Location: **North Portal/Portal**

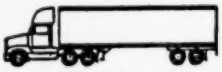
This form was filled out by : Saskatchewan North Dakota Driver

1. Traffic Direction: ☐ NB ☐ SB

PART I VEHICLE and COMMODITY INFORMATION

2. Vehicle Configuration: **# of Axles** _____

Truck


Semi Trailer

Semi Trailer & Single Axle Pup

Semi Trailer & Trailer

Flat Bed

B Train

Semi Trailer & 2 Single Axle Pups

3. Where is the vehicle registered? Province/State Other _____

4. ☐ Empty ☐ Loaded 5. Gross Vehicle Weight: _____ kilograms lbs.

6. Commodity vehicle is carrying? _____ code

PART II TRAVEL INFORMATION

7. Principal Origin: City | Province/State

8. Principal Destination: City | Province/State

9. Route from Origin to Destination: **(please outline on attached maps)**

10. Will you back haul along the same route? **Yes** **No**

If yes, what is the commodity? _____ code

11. Why did you choose these highways?

_____

PART III BORDER CROSSING INFORMATION

12. Approximately, how long does it take you to pass through US/Canada Customs at this port? _____

13. Are you ever delayed at the border crossing? **Yes** **No**
    if yes, reasons for delay? _____

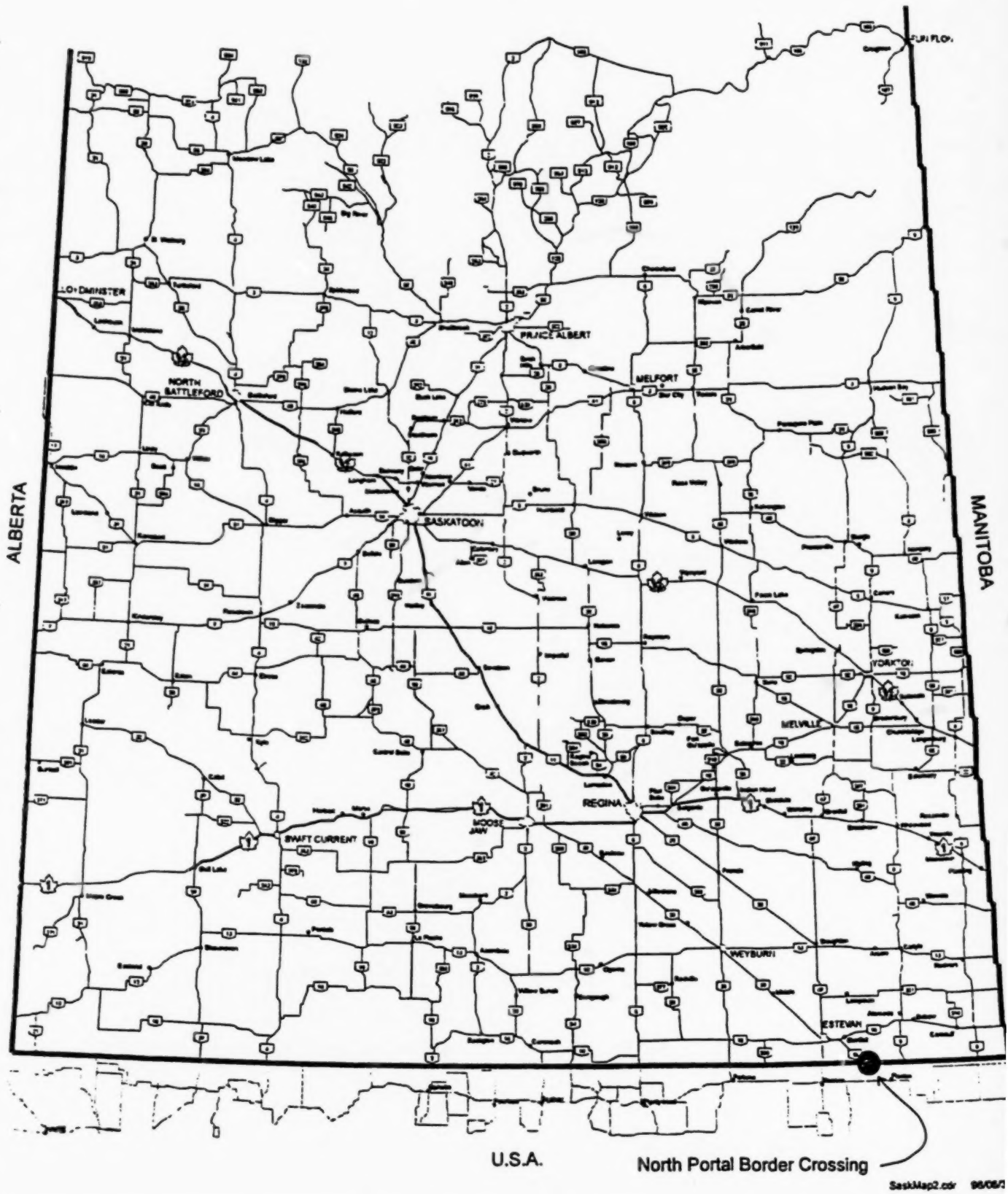
    _____

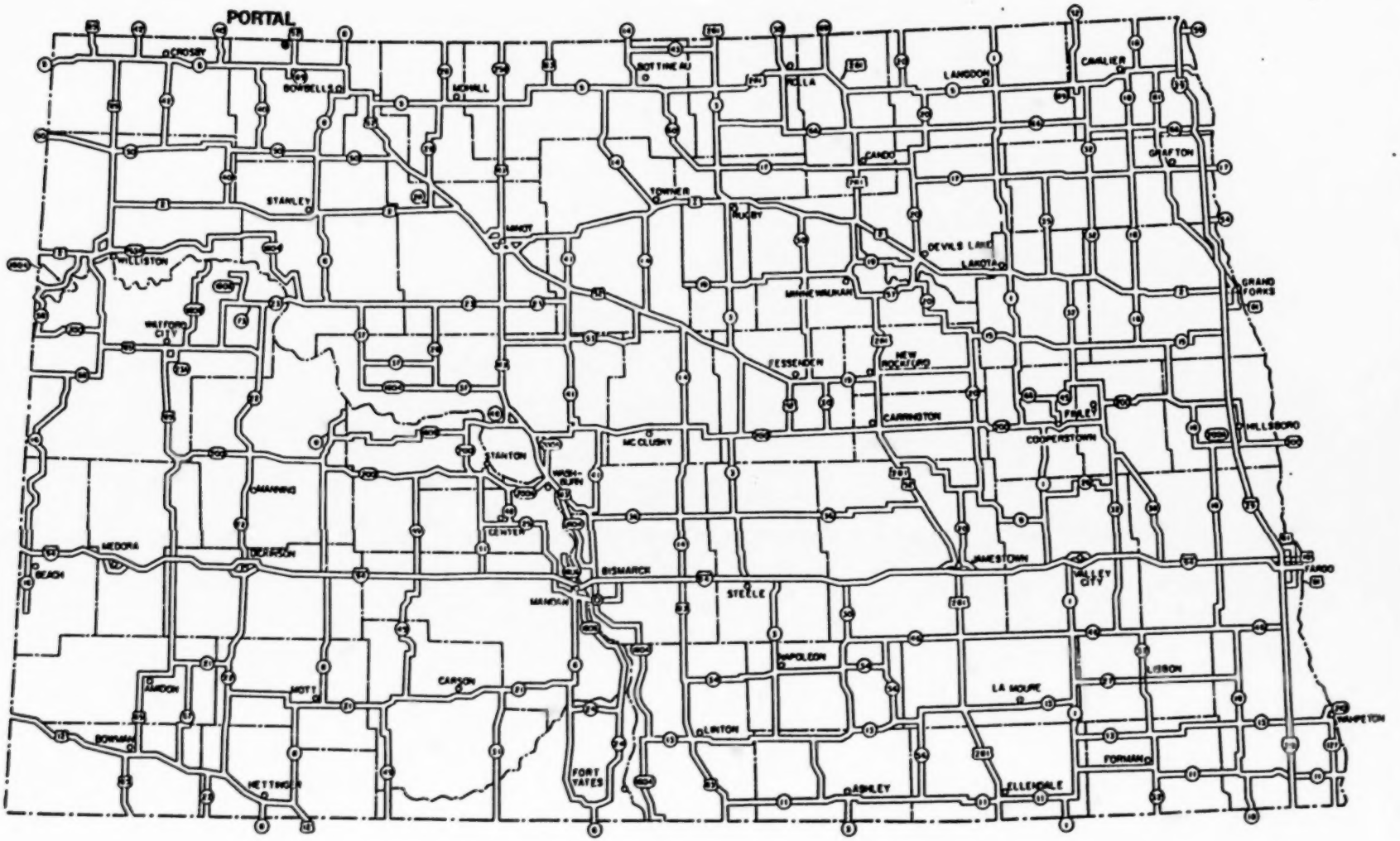
14. Any comments noted during survey:

    _____
    _____
    _____
    _____
    _____
    _____
    _____

Saskatchewan
Highways and
Transportation

Border Crossing and Routing Study




PORTAL
CROSBY
BOWBELLS
KENMARE
BOTTINEAU
ROLLA
LANGDON
CAVALIER
GRAFTON
CANDO
TOWNER
RUGBY
STANLEY
KENMARE
DEVILS LAKE
LAKOTA
WILLISTON
MINNEWAUKAN
GRAND FORKS
WATFORD CITY
FESSENDEN
NEW ROCKFORD
CARRINGTON
PAGE
HILLSBORO
COOPERSTOWN
MC CLUSKY
STANTON
WASHBURN
CENTER
CANNING
MEDORA
BEACH
DEAPSON
BISMARCK
JAMESTOWN
VALLEY CITY
FARGO
STEELE
MANDAN
NAPOLEON
LISBON
LA MOURE
CARSON
MOTT
HAMDON
LEMON
FORMAN
BOWMAN
FORT YATES
HETTINGER
ASHLEY
ELLENDALE